

REMARKS

This paper is submitted in reply to the Office Action dated August 18, 2005, within the three-month period for response. Reconsideration and allowance of all pending claims are respectfully requested.

In the subject Office Action, claims 8-20 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Moreover, claims 1-4, 6-11, 13-15 and 18-19¹ were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,023,586 to Gaisford et al.². Furthermore, claims 5 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gaisford et al., and claims 16-17 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gaisford et al. in view of "The Open Software Description Format: (OSD) by Hoff et al. (Hoff)³.

Applicants respectfully traverse the Examiner's rejections to the extent that they are maintained. Applicants have canceled claims 13 and 19, amended claims 1, 8, 14-15, 18 and 20, and added claims 21 and 22. Applicants respectfully submit that no new matter is being added by the above amendments, as the amendments are fully supported in the specification, drawings and claims as originally filed.

As an initial matter, Applicants wish to thank the Examiner for the courtesy extended in the personal interview between the Examiner and Applicants' representative on October 25, 2005. In the interview, proposed amendments to the claims to address the §101 and art-based rejections were discussed, however no agreement was reached.

¹ Although claims 18 and 19 were not listed as being rejected under 35 U.S.C. § 102(b) in Paragraph 6 of the Office Action, Applicants assume both claims are included, as each is discussed under this paragraph.

² The Office Action refers to U.S. Patent No. 6,155,549 to Janis et al.; however, the Examiner has indicated to Applicants that Gaisford et al. was the intended reference used in the rejections.

³ The Office Action refers only to Hoff in the rejection of claims 16-17 and 20, but incorporates the rejection of claim 15, which is based upon Gaisford et al., so Applicants assume that Gaisford et al. is also being used in the rejection.

Now turning to the subject Office Action, and specifically with regard to the Examiner's refusal to consider the Information Disclosure Statements filed 2/19/02, 5/24/04 and 8/9/04, Applicants note that initiated copies of the 1449 forms from each of these IDS's have been returned to Applicants, so it appears that the Examiner did in fact consider this art. Furthermore, at least with respect to the IDS filed 2/19/02 with the Application, Applicants noted in the IDS that the references were cited in the parent case (S/N 10/021,203). As such, no copies of the references were required pursuant to 37 CFR §1.98(d). Applicants respectfully request a clarification on the status of each IDS in the Examiner's next communication.

Next, turning to the §101 rejections, claim 8 has been amended to clarify that the recited memory is "computer readable", claims 15 and 18 have been amended to clarify that the recited medium is a "tangible computer readable" medium, and claim 19 has been canceled without prejudice. Claim 20 was also amended to correct a minor typographical error. As the Examiner indicated that these amendments would be sufficient to overcome the §101 rejections, reconsideration of these claims and withdrawal of the §101 rejections are respectfully requested.

Next, turning to the art-based rejections, and specifically to the rejection of independent claim 1, this claim generally recites an apparatus that includes a memory within which is resident a plurality of intelligent agents and distribution control information associated with each intelligent agent that defines distribution rights for such intelligent agent, and program code configured to control distribution of an intelligent agent in response to a request to access such intelligent agent based upon the distribution control information associated with such intelligent agent.

Claim 1 has now been amended in two primary respects. First, the claim has been amended to further define the nature of "intelligent agents," as suggested by the Examiner. In particular, the claim has been amended to recite that each intelligent agent is configured to execute within at least one agent runtime, that each agent runtime executes in an operating system environment, and that each intelligent agent has a degree

of autonomy delegated thereto. Support for these amendments may be found, for example, in Figs. 1-2 and pp. 3-4 and 18-19 of the Application as filed.

Second, the claim has been amended to specifically recite that at least one intelligent agent is a mobile intelligent agent capable of being distributed to a remote agent runtime resident in another computer, and that distribution control information associated with the mobile intelligent agent permits distribution of the mobile intelligent agent to the remote agent runtime. The claim has also been amended to recite that the program code controls distribution of the mobile intelligent agent to the remote agent runtime based upon the distribution control information associated therewith. Thus, the claim specifically focuses on the concept of controlling the distribution of a mobile intelligent agent to a remote agent runtime.

In rejecting claim 1, the Examiner relies on Gaisford et al., which generally discloses the distribution of software in a networked environment, with distribution control being provided by a distribution object (cols. 7-9). Of note, however, Gaisford et al. is entirely silent with respect to the concept of intelligent agents. The fact that intelligent agents are software does not undercut the fact that intelligent agents have a number of unique characteristics that distinguish them from other types of software, and that are notably not appreciated by Gaisford et al.

In particular, Gaisford et al. is silent with regard to intelligent agents that have "a degree of autonomy delegated thereto," as required by claim 1. As discussed at pp. 2-3 of the Application, delegated autonomy is one unique characteristic of an intelligent agent that is generally not associated with other types of software. Given that Gaisford et al. does not even mention the term "agent" anywhere in its disclosure, Applicants respectfully submit that this feature is not disclosed by the reference.

In addition, Gaisford et al. does not disclose any runtime environment analogous to an agent runtime that executes within an operating system environment, as is also recited in claim 1. As noted at pp. 18-19, an agent runtime provides a standardized execution environment for agents. This execution environment runs on top of, and is therefore, separate from an operating system. Gaisford et al. does not disclose any

runtime environment that is separate from an operating system environment, and it appears that the distributable software in Gaisford et al. is configured to executed directly within an operating system environment. As such, Applicants submit that this feature is also not disclosed by the reference.

As also noted above, claim 1 recites control over the distribution of a mobile intelligent agent to a remote agent runtime. One disclosed example of a mobile intelligent agent capable of being distributed to a remote agent runtime is an external agent, described at pp. 25-26 of the Application (see also p. 4 for a discussion of mobile intelligent agents). Gaisford et al. does not disclose mobile intelligent agents, much less the control over the distribution of such agents to remote agent runtimes. As such, Applicants submit that this feature is also not disclosed by the reference.

Given that the aforementioned features are not disclosed by Gaisford et al., Applicants submit that claim 1 is novel over the reference, and the rejection of claim 1 should therefore be withdrawn.

Applicants also respectfully submit that claim 1 is non-obvious over Gaisford et al. and the other prior art of record in that there is no suggestion in Gaisford et al. or otherwise in the art for modifying Gaisford et al. to operate in an agent-based environment, whereby intelligent agents having degrees of delegated autonomy are distributed to various agent runtimes based upon distribution control information. Accordingly, Applicants respectfully submit that claim 1 is non-obvious over the prior art of record. Reconsideration and allowance of independent claim 1, as well as of claims 2-7 that depend therefrom, are therefore respectfully requested.

Next, turning to the rejection of independent claim 8, this claim generally recites a method of controlling distribution of an intelligent agent. The method includes maintaining in a memory distribution control information that defines distribution rights to each of a plurality of intelligent agents, and controlling distribution of an intelligent agent among the plurality of intelligent agents in response to a request to access such intelligent agent based upon the distribution control information associated with such intelligent agent.

Claim 8 also been amended to recite, as with claim 1, that each intelligent agent has a degree of autonomy delegated thereto. As noted above, Gaisford et al. does not disclose intelligent agents, nor intelligent agents having autonomy delegated thereto, and as such, claim 8 is novel over the reference for this reason.

Claim 8 has also been amended to essentially incorporate the subject matter of claim 13, and now recites that the plurality of intelligent agents are each configured to perform product support operations in connection with supporting a computer-related product, the distribution control information identifies a first intelligent agent as an internal agent configured to execute on a product support computer, and a second intelligent agent as an external agent configured to execute on a customer computer configured to utilize the computer-related product.⁴ Claim 8 also now recites that controlling distribution includes:

prohibiting distribution of the first intelligent agent to the customer computer based upon the distribution control information associated therewith and permitting distribution of the second intelligent agent to the customer computer based upon the distribution control information associated therewith.

Gaisford et al. does not disclose controlling the distribution of any software, much less any intelligent agent, that is configured to perform product support operations on a computer-related product. In rejecting claim 13, the Examiner asserts that Gaisford et al. discloses distribution and maintenance methods that the Examiner analogizes to product support operations, citing col. 14 of the reference. However, these methods are used to assist in the distribution of software, and are not themselves the software for which distribution is being controlled. Gaisford et al. therefore does not disclose controlling the distribution of software that specifically performs product support operations, and as a result, claim 8 is novel over the reference for this additional reason.

⁴Claim 13 has accordingly been canceled, and claim 14 amended to instead depend from claim 8.

It is also important to note that claim 8 specifically recites that one intelligent agent is configured to execute on a product support computer, while another intelligent agent is configured to execute on a customer computer that utilizes a computer-related product being supported. The Examiner has not provided any analysis as to what elements in Gaisford et al. correspond to these specific components. As such, the rejection is deficient in this regard as well.

Given that the aforementioned features are not disclosed by Gaisford et al., Applicants submit that claim 8 is novel over the reference, and the rejection of claim 8 should therefore be withdrawn.

Applicants also respectfully submit that claim 8 is non-obvious over Gaisford et al. and the other prior art of record in that there is no suggestion in Gaisford et al. or otherwise in the art for modifying Gaisford et al. to operate in an agent-based environment including product support and customer computers to perform product support operations on a computer-related product used by the customer computer. Accordingly, Applicants respectfully submit that claim 8 is non-obvious over the prior art of record. Reconsideration and allowance of independent claim 8, as well as of claims 9-12 and 14 that depend therefrom, are therefore respectfully requested.

Next, turning to the rejection of independent claim 15, this claim generally recites a program product that includes *inter alia* an intelligent agent and a header associated with the intelligent agent and including distribution control information that defines distribution rights to the intelligent agent.

Claim 15 has been amended in a similar manner to claim 8, and now recites that the intelligent agent is configured for use in performing a product support operation in connection with supporting a computer-related product, and that the intelligent agent has a degree of autonomy delegated thereto. The claim also now recites that the distribution control information in the header identifies a publishing level selected from among a first publishing level that characterizes the intelligent agent as an internal agent configured to execute on a product support computer, and a second publishing level that characterizes the intelligent agent as an external agent configured to execute on a customer computer

configured to utilize the computer-related product, where the first publishing level prohibits distribution of the intelligent agent to a customer computer and the second publishing level permits distribution of the intelligent agent to a customer computer. Publishing levels are discussed, for example, at pp. 25-26 of the Application as filed.

As discussed above in connection with claim 8, Gaisford et al. does not disclose or suggest an intelligent agent having delegated autonomy and for use in performing a product support operation in connection with supporting a computer-related product. Nor does Gaisford et al. disclose or suggest the concept of providing distribution control information that characterizes an agent as either an internal agent configured to execute on a product support computer or an external agent configured to be distributed to and executed on a customer computer. Accordingly, claim 15 is novel and non-obvious over Gaisford et al. for the same reasons discussed above in connection with claim 8. Reconsideration and allowance of claim 15, as well as of claims 16-17 that depend therefrom, are therefore respectfully requested.

Next, with respect to the rejection of independent claim 18, this claim has been amended in a similar manner to claim 1, and now recites a program product including *inter alia* program code configured to control distribution of a plurality of intelligent agents, where each intelligent agent is configured to execute within at least one agent runtime, where each agent runtime executes in an operating system environment, and where each intelligent agent has a degree of autonomy delegated thereto. Claim 18 also recites that at least one intelligent agent is a mobile intelligent agent capable of being distributed to a remote agent runtime resident in another computer, and that distribution control information associated with the mobile intelligent agent defines a distribution right for the mobile intelligent agent that permits distribution of the mobile intelligent agent to the remote agent runtime. Claim 18 additionally recites that the program code is further configured to control distribution of the mobile intelligent agent to the remote agent runtime in response to a request to access such mobile intelligent agent by accessing the distribution control information associated with such mobile intelligent agent.

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Amendment and Response dated November 18, 2005
Reply to Office Action of August 18, 2005
IBM Docket ROC920010146US2
WH&E IBM/201DV1
K:\ibm201DV1\Amendment and Response re 8-18-05 OA.wpd

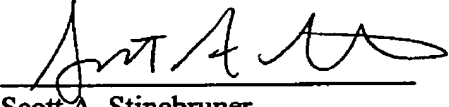
As discussed above in connection with claim 1, this combination of features is not disclosed or suggested by Gaisford et al. or the other prior art of record. Accordingly, Reconsideration and allowance of claim 18, as well as of claim 20 that depends therefrom, are therefore respectfully requested.

Finally, the Examiner will note that Applicants have added new claims 21 and 22, which respectively depend from claims 6 and 8, and which recite that at least a subset of the plurality of intelligent agents is configured to access a cross-customer knowledge base including information collected from a plurality of customers, support for which may be found at p. 12 of the Application as filed. Applicants submit this feature is not disclosed or suggested by Gaisford et al., and as such, consideration and allowance of these claims are respectfully requested.

In summary, Applicants respectfully submit that all pending claims are novel and non-obvious over the prior art of record. Reconsideration and allowance of all pending claims are therefore respectfully requested. If the Examiner has any questions regarding the foregoing, or which might otherwise further this case onto allowance, the Examiner may contact the undersigned at (513) 241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

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Date


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